LITERARY SUPPLEMENT

THE WASHINGTON HERALD

MAGAZINE SECTION

WASHINGTON, D. C., SUNDAY, JULY 23, 1911.

HOW CENSUS BUREAU LOCATES THE CENTER OF POPULATION OF THE UNITED STATES

Spot from Which There Is an Equal Distribution of People in All Directions Has Moved Westward Every Year Since 1790.

POSITION OF THE CENTER OF POPULATION: 1790 TO 1910.

1790—Twenty-three miles east of Baltimore, Md.
1800—Eighteen miles west of Baltimore, Md.
1810—Forty miles northwest by west of Washington, D. C.
1820—Sixteen miles north of Woodstock, Va.
1830—Nineteen miles west-southwest of Moorefield, in the present State of West Virginia.
1840—Sixteen miles south of Clarksburg, in the present State of West Virginia.
1850—Twenty-three miles southeast of Parkersburg, in the present State of West Virginia.
1860—Twenty miles south of Chillicothe, Ohio.
1870—Forty-eight miles east by north of Cincinnati, Ohio.
1880—Eight miles west by south of Cincinnati, Ohio.
1890—Twenty miles east of Columbus, Ind.
1900—Six miles southeast of Columbus, Ind.
1910—Four and one-miles south of Unionville, Monroe County, Ind.

After weeks of complex calculation and the compilation of many tables of figures the chief geographer of the Census Bureau and his assistants were able last Tuesday to announce the location of the center of the population of the United States for the month of June, 1910, when the last census was taken. To the average citizen the announcement meant little, but to the Census Bureau officials it was the culmination of one of the most interesting statistical feats performed under their direction every decade.

Just what is the center of population is a question that arises in the minds of the majority of newspaper readers when they are informed that this mystic, shifting spot has been located again. It is merely the spot on the map from which there is an equal distribution of population to the four points of the compass. In other words, if one should stand on the spot near Unionville, Ind., where the census office will erect the granite shaft for 1910, there would be just as many people in the United States to your right hand as to your left, and behind you as in front of you, no matter which way you turned.

Shows Country's Growth.

The main purpose of the center of population is to show in what direction there has been the greatest development and growth in population since the preceding census. By no other means is the real growth of the country revealed so well. In the case of the United States, of course, it has been a decadinal reiteration of westward the course of the empire takes its way. Slowly but surely the center of population has worked toward the Mississippi since the first census was taken in 1790.

To secure the center of population Geographer Charles S. Sloane first assumed that every person in the United States tips the scales at the same weight, 100 pounds. This reduces the center of population to a question of determining the point on which the United States would balance, disregarding the existence of mountains and water courses, as a plate balances on the wand point of a juggler. It is the center of gravity of the population.

The census geographer then distributes the population according to what he calls "square degrees," which are the areas included between consecutive parallels of latitude and meridians of longitude. A point is then assumed, tentatively, as the center and corrections in latitude and longitude to this tentative position are computed. The population of each "square degree" is assumed to be located at the center of that square degree, except in cases where this assumption is manifestly untrue, as, for instance, where a large part of that square degree is occupied by the sea or other large body of water or where it contains a city of considerable magnitude which is located "off center." In these cases the position of the center of the population of the square degree is estimated as closely as possible.

Mathematical Problem.

The next process is to work out the shortest distance between each center of population of the square degrees and the assumed parallel and meridian. The population of each square degree is then multiplied by the shortest distance of its center of population from the assumed parallel of latitude and the sums of the products, or moments, north and south of that parallel are obtained. Their difference, divided by the total population of the country, gives a correction to be applied to the latitude of the assumed center of population of the country. In a similar manner the east and west moments are secured, and from them a correction to the longitude of the assumed center of population of the country is obtained. By applying both corrections to the latitude and longitude of the point that was first arbitrarily picked as the tentative center of population the true center is located.

First Center Near Baltimore.

The westward movement of the center of population since 1790 throws an interesting light on the development of this great nation. At the time of the first census the ecnter of population was 39 degrees 56.5 minutes north latitude and 76 degrees 11.2 minutes west longitude, which by comparison with the best maps obtainable would seem to place it about twenty-three miles east of Baltimore. During the decade between 1790 and 1800 it appears to have moved almost due west to a point about eighteen miles west of the same city.

From 1800 to 1810 the center skipped by Washington to the northward and westward, being located finally to a point about forty miles northwest by west of Washington. The southward movement during this decade was due to the annexation of Louisiana, which contained quite extensive settlements, enough to draw the center of population off its purely westward course.

During the ten years following it moved westward again and still slightly to the south to a point about sixteen miles north of Woodstock, Va. This second southward movement appears to have been due to the extension of settlements in Mississippi, Alabama, and Eastern Georgia.

From 1820 to 1830 it moved still farther westward and southward to a point about nineteen miles southwest of Moorefield, in the present State of West Virginia. This is the most decided southward movement that it has made during any decade. It appears to have been due in part to the addition of Florida to our territory, and in part to the great extension of settlements in Alabama, Louisiana, Mississippi, and Arkansas, or generally, it may be said, in the Southwest.

In West Virginia.

From 1830 to 1840 it moved still farther westward, but slightly changed its direction northward, reaching a point sixteen miles south of Clarksburg, in the present State of West Virginia. During this decade settlement had made decided advances in the prairie States and in the southern portions of Michigan and Wisconsin, the balance of increased settlement evidently being in favor of the Northwest.

From 1840 to 1850 it moved westward and slightly southward again, reaching a point about twenty-three miles southeast of Parkersburg, in the present State of West Virginia, the change of direction southward being largely due to the annexation of Texas.

From 1850 to 1860 it moved westward and slightly northward, reaching a point twenty miles south of Chillicothe, Ohio.

From 1860 to 1870 it moved westward and sharply northward, reaching a point about forty-eight miles east by north of Cincinnati, Ohio. This northward movement was due in part to waste and destruction in the South consequent upon the civil war, and in part, probably, to the fact that the census of 1870 was defective in its enumeration of the Southern people, especially of the newly enfranchised negro population.

In 1880 the center of population had returned southward to nearly the same latitude which it had in 1860. This southward movement was due only in part to an imerpfect enumeration at the South in 1870. During the decade from 1870 to 1880 the Southern States made a large positive increase, both from natural growth and from migration southward.

A Northward Movement.

In 1890 the center of population had moved northward into practically the same latitude it occupied in 1870. This northward movement was largely due to the great development in the cities of the Northwest and in the State of Washington, and also to the increase of population in New England.

During the decade between 1890 and 1900 the center of population has moved westward a little over fourteen miles, and southward a little less than three miles. This is the smallest movement that has ever been noted. The slight southward movement is due largely to the great increase in population of the Indian Territory, Oklahoma, and Texas, while the reat degcrease in the westward movement of the center is undoubtedly due to the large increase in the population of the North Atlantic States. It also shows that the population of the Western States did not increase as rapidly as in former decades.

In the past ten years the center has moved northward only seven-tenths of a mile and westward approximately thirty-one miles, more than twice the westward movement of the previous decade. This acceleration of the western movement is due principally to the growth of the Pacific and Southwestern States.

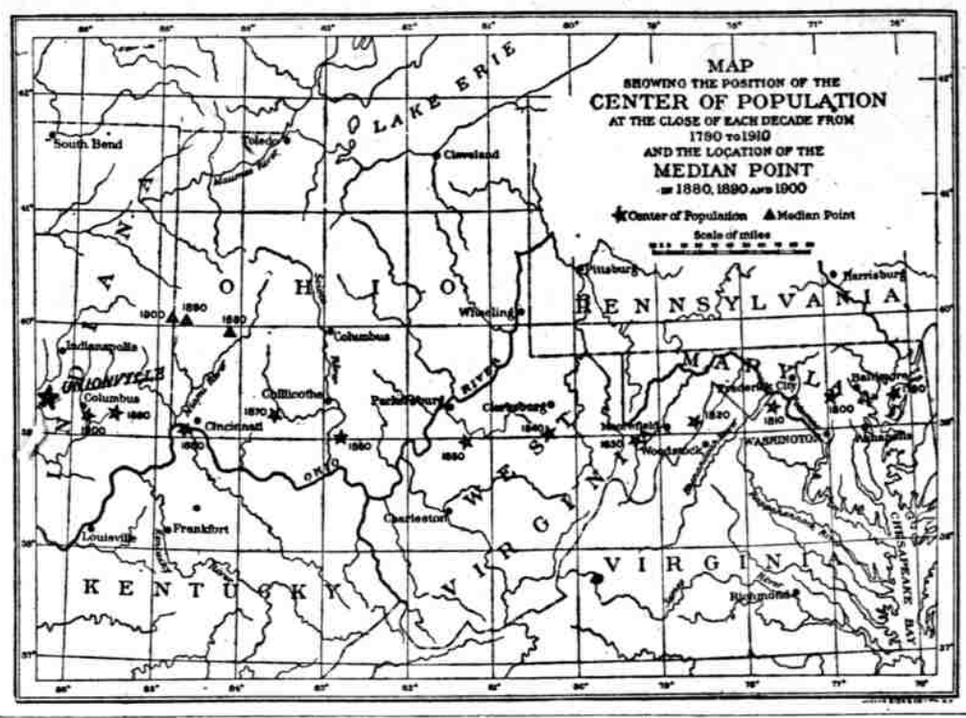
Moves Almost Due West.

The closeness with which the center of population, through its rapid westward movement, has clung to the parallel of 39 degrees of latitude cannot fail to be noticed. The most northern point reached was at the start in 1790; the most southern point was in 1830, the preceding decade having witnessed a rapid development of population in the Southwest—Alabama, Arkansas, Mississippi, and Louisiana having been admitted as States and Florida annexed and organized as a Territory. The extreme variation in latitude has been less than 19 minutes, while the 110 years of record have accomplished a movement in longitude of a little over 9.5 degrees. Assuming the westward movement to have been uniformly along the parallel of 39 degrees of latitude, the westward movement of the several decades has been as follows: 1790-1800, 41 miles; 1800-1810, 36 miles; 1810-1820, 50 miles; 1820-1830, 39 miles; 1830-1840, 55 miles; 1840-1850, 55 miles; 1850-1860, 81 miles; 1860-1870, 42 miles; 1870-1880, 53 miles; 1880-1890, 48 miles; 1890-1900 14 miles; 1900-1910, 31 miles. This is a total westward movement of 540 miles since 1790. The sudden acceleration of movement between 1850 and 1860 was due to the transfer of a considerable body of population from the Atlantic to the Pacific coast, twelve individuals in San Francisco exerting as much pressure at the then pivotal point, namely, the crossing of the eighty-third meridian and the thirty-ninth parallel, as forty individuals in Boston.

The Median Point.

There is another point figured out in connection with the center of population. It is called the "median point." It is the point of intersection of the line dividing the population equally north and south with the line dividing it equally east and west. In short, it is the central point of the population. It differs from the center of population in the fact that distance from the center is not considered. Its movements from census to census bear no relation to the movements of the population, since only movements by which bodies of population are transferred across its parallel or its meridian have any influence upon its position. To illustrate this: A million people may move from Minnesota to Washington State without affecting its position, while the movement of a hundred persons from Michigan to Wisconsin might affect it appreciably. In 1900 the meridian of 84 degrees 51 minutes 29 seconds equally divided the population of the United States east and west, and the parallel of 40 degrees 4 minutes 22 seconds equally divided it north and south. The median point, therefore, was located at Spartanburg, Ind. The new median point has not yet been announced.

HOW THE CENTER HAS MARCHED STEADILY WESTWARD.



FIRST MOTION PICTURE WAS MADE IN AMERICA

The father of moving pictures is known. After years of research and the most careful investigation of the claims of hundreds who have asserted that this or that idea in the creation of moving photography was their own, Lyman H. Howe, a leading producer of animated scenes, declares he has found the evidence that makes America the scene of the making of the first moving picture.

As with many important things that have made humanity wonder, the birth of the moving picture was an accident. The story of just how a wager was made between the governor of California (Leland Stanford) and a friend as to whether a horse ever has four legs off the ground at the same moment while running is now the important link in Mr. Howe's records, which completes, he says, the history of the moving picture's beginning. This was in 1872.

Eadweard Muybridge, who answered the question by an experiment in photography, brought moving pictures into existence at the same time. Muybridge was in charge of the general photographic survey of the Pacific coast in California. He was an Englishman, born at Kingston-on-Thames in 1830, and had come to America at an early age. He was asked to settle the point. At the executive's Palo Alto ranch the manner of operation of four-footed animals in their various gait was made the subject, unconsciously to Muybridge himself, of the first moving picture experiment.

Twenty-four cameras were placed in line to cover each movement of a horse and rider. The camera shutters were moved by connecting pieces of string, which the animal broke as he passed. The strings were stretched across the path of the animal as he approached the hurdle, jumped, and ran on.

The result was a series of pictures showing each movement of the horse. It settled the argument, and it caused Muybridge to think of what an important thing it would be to present the photos in motion.

To do this, Muybridge copied the method familiar to those who remember the toy known as "zoetrope." This toy was a pasteboard cylinder with slits in the upper section, and when it revolved rapidly it reproduced drawing apparently in motion.

No photos ever had been used in it, the effect resulting, for instance, from a series of sketches made from the imagination of a man chopping wood, each movement of the man, from lifting the ax to its descent, having been drawn separately, but acting as a whole when the zoetrope revolved.

To reproduce the effect upon a screen, using photographs, was a mechanical feat which was finally conquered, the movements of the horse being shown, but no background. Muybridge proved by this that the conventional drawings made previously of a horse in motion were wrong, as the horse did not use his feet and legs in the way the artists had represented them, and that, except in jumping, no animal ever had all its feet off the ground at one time.

This was before the introduction of the flexible film for the camera and before rapid photography had been developed. Muybridge lived to see the wonderful moving picture of to-day. He must have enjoyed the development of his crude idea in general lines rather than confined to the study of animals.

Muybridge died in 1904 at his home in England. He left with the officials of the community and his friends the photographs and much of the apparatus used in his experiments.

One who now sees moving picture reproductions, vivid scenes of real life that seem an open window through which the man in the theater in his home city may view the manner of living of humanity on the other side of the globe, may witness news events often more completely than if he had been at the places depicted, has much to thank, it seems, to the argument in California in 1872 and the judge who found something big in his method of decision.

FRANKLIN PARK SPRING ONCE FED WHITE HOUSE

Poison Scare of Spanish War Days Caused Its Abandonment and It Has Been Pronounced Unfit for Use.

Concealed in an old cistern, vaulted over and covered with grass save where two traps protrude above the lawn, is a spring in Franklin Square that once supplied the White House with water. Thirty feet north of the fountain is the first of these entrances, which are ten feet apart, and hewn out of solid rock, with heavy iron lids, great strap hinges, and ponderous, rusting locks.

A line of pump logs was used to convey the water to the Executive Mansion, and the State, War, and Navy and Treasury buildings were also supplied in this way, as were sections along Pennsylvania avenue up to Seventeenth street. But, as many Washingtonians believe, this spring did not supply the old hydrants at the northwest and southwest corners of H street, intersection of New York avenue and Thirteenth street, nor the ones located at Tenth and I streets, Fourteenth street and Pennsylvania avenue, and Ninth and I streets northwest. These were fed by a spring in a vaulted inclosure, with an entrance on the west side of Thirteenth street, a short distance below the Franklin School, where an old round trap is still in existence.

There are residents who remember the hydrant at the White House as far back as Buchanan's and Lincoln's administrations, and then it was anything but an innovation. But it is hard to find any record of when the pipes were first laid. One historian, in speaking of the development of the city in 1820, says: "People walking along Pennsylvania avenue from the Capitol to the White House were able to quench their thirst with spring water drawn from wooden hydrants put up by the local government." And it is not unreasonable to assume the White House was receiving its supply before this, even when President Adams came to the new Federal City and his wife hung her clothes to dry in the East Room of her unfinished home. This is probably true, for years ago an old cistern fed from the spring was filled up and replaced by a hydrant with gravity feed.

Building Cuts Into Flow.

In the latter part of Harrison's administration the Cochran Hotel was built, on the northwest corner of Fourteenth and K streets. While the foundations were being dug a large vein of water was struck, which was discharged into a sewer, so that the erection of the building could continue. This water can still be seen flowing under a sewer trap in the cellar of the hotel.

But with the diversion of the stream it was discovered that the water in the cistern had fallen from its former height of sixteen feet to only several feet of depth. Though the supply was not wholly cut off, the abundant flow which had made this old spring on its slight eminence a natural reservoir was ended. Efforts were made by the Office of Public Buildings and Grounds to keep up the White House supply, for the water was of crystal clearness and unusually refreshing.

A section of the pump log line was replaced by a terra cotta pipe, which was lowered several feet, and, starting from the spring, run through the alley bounded by Thirteenth and Fourteenth and H and I streets, under the triangle formed by the intersection of New York avenue, H street and Fourteenth street and on New York avenue to Fourteenth street, where it was coupled to the wooden pipe, and the hydrant at the White House was lowered three feet.

But the flow dwindled until spring water could no longer be had at the White House. Shortly after Cleveland came into office a pipe was run from the spring opposite Franklin School to the cistern in Franklin Square, and the hydrant was again used at the Executive Mansion. But this cut off the public hydrants, which the people strongly opposed, and as a result the District ordered the pipe disconnected. Subsequently the hydrants were removed as insanitary, owing to the proximity of sewers to the spring.

Believed It Was Poisoned.

During the Spanish-American war a poison scare was current in the neighborhood of Franklin Square. People were "afraid an enemy would drop poison in the cistern," which would be carried to the White House and kill President McKinley. This is easily understood, however, because water was drawn from the spring as late as 1902 and used by residents of the neighborhood, many of whom believed it still ran to the White House.

In 1902 a greenish, oily scum was frequently seen on the water, which alarmed the park officials, and they ordered the water analyzed. A chemist in the Surgeon General's office was given the task. He reported it slightly contaminated with sewage and advised against its use for drinking purposes. Since then the iron lids have been locked.

About two years ago a section of the pump logs was unearthed. It was in excellent shape, nearly a foot in diameter, with a hole that would measure three inches, and made of soft white wood—probably poplar.

But the old park has other historical connections. Before l'Enfant was commissioned by Washington to design a city beautiful for the Federal Capital, and before the ideal spot for its site was chosen, it is a matter of history that Indian tribes met in council on the peninsula formed by the junction of the Eastern Branch and the Potomac River. And it is equally true that many a war dance was celebrated on the ground occupied by Franklin Square. At one time, it is said, the park was used as a truck garden of the old Van Ness estate.

Zouaves Camped There.

In the civil war it was used as a military camp, the Twelfth Regiment of New York Zouaves being stationed there. Now it is not an infrequent sight to see an old veteran hunting for the place he had rolled in his blanket fifty years ago. A few years ago an aged man hobbled to a stately paulownia tree, declaring he had pitched his tent under it, and that it hadn't grown an inch, though fifty years ago it must have been a sapling.

Years ago Franklin Square was surrounded by a tall fence, as were other parks in the city. An epoch was marked when these fences were torn down. In an interview an oldest inhabitant said: "For preservation of park beauty fences were necessary. Hogs, geese, goats, and cows ran unhaltered in the streets. When Alexander R. Shepherd became governor of the District, Washington improved. To his genius is due the city's development."

I the '70's, before Rock Creek Park was decided upon as the permanent location of the Zoo, Franklin Square was considered tentatively, and a line of cages containing eagles, monkeys, and owls was south of the fountain.

Facing the park, 1307 K street, a small frame house bearing the device "Althea," is where the Alabama Claims Commission met, which resulted in sovereigns of five nations deciding that England should indemnify the United States to the extent of $15,500,000 for her negligence in permitting Confederate privateers to be built on English soil. A facsimile of the draft ordering the payment may be seen in the loan division of the Secretary's office in the Treasury.

Secretaries Stanton and Sherman also lived in the same block.

The Park To-day.

But the park has a present as well as a past. It boasts Washington's tallest trees—spreading beeches, majestic maples, and giant oaks—and is one of the few local parks that has a natural, rolling surface. It has more than its quota of squirrels, and birds fill the trees. In summer it is cool and frequented by the first people of the city.

But it is confronted with urban thrift and progress. A short while ago this part of Fourteenth street was heralded as "Washington's coming business section." Across the street are three large real estate dealers. Above and below are situated the largest automobile salesrooms in the city. Perhaps, eventually, the old park will be wiped out by "progress," but now Franklin Square remains, with its rolling sward and gigantic trees, a beautiful cenotaph, worthy to mark the memory of the man whose name it bears.

S. H. WILKE.

HOW EUROPEANS ENJOY THEIR SURF BATHING

To an American accustomed to the democracy of the Atlantic and Pacific coast resorts to bathe in the surf at any place abroad is an experience fraught with many strange and unusual experiences.

It is not only in the segregation of the sexes that bathing in Europe and America presents curious contrasts. In many resorts in England the bathing machine or wagon that is moved in and out with the tide is used. In other resorts the bath house is simply a tent.

Persons who have spent summers on both sides of the Atlantic assert that, in the main, the American method of salt water bathing is far more practical and satisfactory than that which is practiced upon the European side of the big water.

Upon the continent the best known bathing shores are at Ostend, in Belgium; Dieppe, Cherbourg, Etretat, Trouville, and Boulogne, in France; Scheveningen, in Holland, and Brighton, Folkstone, and a number of other places along the English coast.

One rarely sees at any of the European seashore resorts such daring costumes as are to be found along the American coast. The intense heat along our coast and the undisputed reign of the summer girl in America have resulted in an independence of bathing styles on this side of the Atlantic that has excelled European ideas upon the subject. Here the use of light flannels, cotton goods, linens, and muslins has advanced far beyond anything abroad. Upon European seashores the clothes, as a rule, are heavy and ugly.

Neither do the people of Continental Europe enjoy the pleasures of the surf with the same avidity as marks the summer day along the American coast. There is more or less of custom or fashion to dictate to the temporary dwellers along the seashore.

Confined to Morning Hours.

At most European resorts bathing is confined in the morning hours. Visitors from the Old World who spend the summer along the Atlantic coast of America express surprise that midday is chosen as the bathing hour here. They claim that American make too serious a business of bathing. The French, for instance, look upon bathing as frolic, not as a regular pastime or daily habit. They regard their frisking in the surf as something that marks exuberance of spirits, just as one would feel impelled to weak a mask or throw confetti upon the occasion of a festival.

Unlike Americans, Englishmen prefer to have their surf bath before breakfast. They slip out of their rooms and into the surf as a sort of duty, and prefer a buff bath, or one without the incumbrances of a bathing suit, if they can be permitted to enjoy it. With them the bath even in the breakers is more of a duty than a pastime, as it is with the French and the Americans.

For years in certain parts of England a man venturing upon the grounds set apart for women at bathing hours would be liable to arrest. In France mixed bathing has been permitted to a much greater extent than in England. And yet in England, as a general rule, the bathing grounds of the two sexes at any resort are only a short distance from each other along the beach, and both are in full view of the crowds to be found there every day.

Inconsistencies in Attire.

Segregation of bathing grounds has naturally led to remarkable inconsistencies in bathing attire. To the American visitor in England the bathing costumes for women are apt to prove rather startling at first sight. Usually they are in one piece, skirts not being considered necessary. As these outfits are almost invariably tight in fit, and the materials more flimsy than are seen on this side of the Atlantic, the effect often argues strongly in favor of separate bathing.

Even more striking is the usual garb of the Englishman in the water. It consists practically of the familiar swimming tights of the American boy, and the American visitor who dons such an apparel for the first time and steps forth from the bathhouse or tent feels more like seeking the seclusion of neighboring bushes than plunging into the breakers that await.

The bathing machine which is in use at most European resorts is in keeping with the idea of privacy of the ocean bath, the bather being enabled to step immediately into the surf from his or her dressing rooms, instead of being compelled to walk across a wide expanse of beach, as at Coney Island or Atlantic City.

Upon some parts of the Continental coast, however, as at Trouville, the bath houses, because of the abruptly sloping nature of the beach, are stationary. In such cases, the bather is given a peignoir, or covering, that generally consists of a white muslin sheet, enveloping the figure from head to foot during the walk from the bathhouse to the water's edge. Upon leaving the surf, the bather is once more enveloped in this sheet, and in it returns to the little dressing room.

At Folkstone, in England, is a mammoth bathing machine, that is pushed out into any desired depth. Similar to it, but smaller, is the "moving bridge" at St. Malo, France, which runs on a track laid into the ocean, and takes a party out into the depths.

Customs at Ostend.

Ostend, Belgium, is probably the finest and most sought European sea resort, having a magnificent stretch of beach. There bathing is altogether from "machine" or movable houses, that are pushed into and drawn out of the water. Beach masters are in charge of the "machines" at Ostend. Frequently they will draw them in or out of the water while the occupants are dressing or undressing, often giving them rude jolts.

A similar custom prevails at Trouville, on the French coast. There, as at Ostend, the bather is charged separately for the various necessities or luxuries of the bath. For 2 francs he may have a large van near the surf, or for 35 centimes can obtain a less desirable bathing box. If he wishes a towel, it will cost him 10 centimes, and a peignoir, or enveloping sheet, calls for 15 centimes. In any event, he is obliged to have a bathing costume costing at least 25 centimes.

The amusements to be indulged in after the bath at European seashores are by no means as varied or elaborate as at ours.

At each French resort there is usually a casino, where the middle-aged and elderly man find charms to sooth the hurt of rushing hours. There is generally a little theater, where the most accomplished Parisian artists appear during the season, as well as other features that appeal to the seeker of the airy summer pastime. Horse racing is also a feature of most French summer resorts.

The average Englishman at the seashore does not care to exert himself to find amusement. After his bath is done—and the bath is taken more as a duty than a pleasure—he sits himself in a comfortable chair upon the sands and waits for entertainment to come to him.

He will cheerfully accept the crudest sort of undertaking in the entertainment line. Wandering minstrel troupes are common along the beach lines of English resorts, and while their performances are more or less "raw," they are generally acceptable.